

REMARKS

In the Office Action, claims 74-76, 83, 86, 150-152, 159, and 162 were rejected and claims 77-79, 84, 85, 153, 154, 160 and 161 were objected to. With this Amendment, claims 74-76, 84, 150-152, and 162 were amended and claim 86 was canceled. As a result of this Amendment, claims 6-8, 10, 13-15, 19, 74-85, 111-113, 115, 118-120, 124, and 150-164 are pending in the above-referenced Application.

Applicant acknowledges the allowance of claims 6-8, 10, 13-15, 19, 80-82, 111-113, 115, 118-120, 124, 155-158, 163, and 164, and the allowability of claims 77-79, 84, 85, 153, 154, 160, and 161.

Claims 74-76, 150-152, and 162

Applicant respectfully requests reconsideration of the rejection of claims 74-76, 150-152, and 162 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,411,576 (Furukawa). As amended, claims 74-76 and 150-152 recite a **guest-host type** liquid crystal device.

Furukawa discloses an aberration compensation device incorporating a liquid crystal panel. As the Office Action indicates, Furukawa does not disclose or suggest a guest-host type liquid crystal device.

Further, the liquid crystal device of Applicant's invention accomplishes light **intensity** modulation as either a twisted pneumatic liquid crystal device, a ferroelectric liquid crystal device, or a guest host liquid crystal device, and controls a **transmittance** of light made incident on the liquid crystal device.

On the other hand, Furukawa and Saimi use a liquid crystal panel as a light **phase** modulator to compensate for wave front aberration that is due to tilt. (see Furukawa, column 5, lines 65-67). In both references, modulation of light **intensity** does not take place, but only changes light phase because of birefringence of the liquid crystal material. Therefore, the Office Action's conclusion that either reference "thereby inherently control(s) a **transmittance** of light made incident on said liquid crystal device" is not correct.

Further regarding claims 75 and 151, Furukawa discloses only a **relation in a phase difference versus drive voltage** in Figures 5A-5C, but nowhere discloses a **drive pulse** as claimed, wherein an **average per unit time** of positive and negative pulse heights of drive pulses applied between drive electrodes of said liquid crystal device upon modulation of the pulse width of each drive pulse is preferably zero.

Further regarding claims 76 and 152, Furukawa discloses signal voltages Sdv1 and Sdv3 applied on **different patterned regions** (Figure 4B and column 8, lines 7-26). Thus, Furukawa teaches away from the present invention where the modulation of the pulse width of each drive pulse is performed in such a manner that the waveform of each drive pulse is present in a **period of a basic frequency**.

In summary regarding claims 74-76, 150-152, and 162, Furukawa and Saimi fail to show a guest-host type liquid crystal device or controlling a transmittance of light made incident on the liquid crystal device. Further regarding claims 75 and 151, Furukawa and Saimi fail to show a drive pulse as claimed, wherein an average per unit time of positive and negative pulse heights of drive pulses applied between drive electrodes of said liquid crystal device upon modulation of the pulse width of each drive pulse is preferably zero. Further regarding claims 76 and 152, Furukawa and Saimi fail to show the modulation of the pulse width of each drive pulse is performed in such a manner that the waveform of each drive pulse is present in a period of a basic frequency. For these reasons, the rejections of claims 74-76, 150-152, and 162 are improper and should be withdrawn.

Claims 83 and 159

Applicant respectfully requests reconsideration of the rejection of claims 83 and 159 under 35 U.S.C. § 103(a) as being unpatentable over Furukawa in view of U.S. Patent No. 6,430,137 (Saimi). Claims 83 and 159 recite a **polarizing plate** in an optical path of light made incident on a liquid crystal device.

Furukawa discloses an aberration compensation device. Furukawa does not disclose or suggest a polarizing plate.

Saimi also discloses an aberration compensation device. Saimi further discloses a radiation source emitting **polarized light as the light source** (e.g., reference number 101 and claim 1) and a deflection hologram (e.g., reference number 109) arranged so that it can transmit the polarized light emitted by the light source. Moreover, a **$\lambda/4$ plate** (e.g., reference number 115) is arranged between a wavefront transformer element (i.e., reference number 104) and an object lens (i.e., reference number 105). The light beam emitted from the radiation source that emits a polarized light is transmitted through the polarization hologram and is circularly polarized by the $\lambda/4$ plate. Thus, the disclosure of Saimi clearly indicates that the plate (e.g., reference number 115) of Saimi is *not* a **polarizing plate**, as claimed in the present invention, but

rather a $\lambda/4$ plate. The difference between the two plates is significant. The $\lambda/4$ plate transforms a linearly polarized light into a circularly polarized light. In contrast, in the present invention, the polarizing plate transforms a non-polarized incident light into a polarized light that is substantially linear (e.g., see Figure 3 of the present invention).

Because Furukawa and Saimi, independently and in combination, do not show or suggest all of the elements of claims 83 and 159, the rejections of them are improper and should be withdrawn.

Claims 77-79, 84, 85, 153, 154, 160, and 161

Applicant respectfully requests reconsideration of the objections of claims 77-79, 84, 85, 153, 154, 160, and 161 as containing allowable subject matter but being dependant on rejected claims.

Claims 77-79 depend either directly or indirectly from claim 76. Because claim 76 should be allowed as described above, the objections of claims 77-79 should be withdrawn.

Claim 84, indicated in the Office Action as being allowable, has been amended to be in independent form. Claim 85 depends directly from claim 84. Therefore, the objections regarding claims 84 and 85 should be withdrawn.

Claims 153 and 154 depend directly from claim 152. Because claim 152 should be allowed as described above, the objections of claims 153 and 154 should be withdrawn.

Claims 160 and 161 depend either directly or indirectly from claim 159. Because claim 159 should be allowed as described above, the objections to claims 160 and 161 should be withdrawn.

CONCLUSION

As it is believed the application is in condition for allowance, favorable action and Notice of Allowance are respectfully requested.

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Respectfully submitted,

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